

ENPP7 Protein, Human, Recombinant (His)

General Information

Synonyms:	ectonucleotide pyrophosphatase/phosphodiesterase 7;ALK-SMase;NPP7;NPP-7;E-NPP7
Protein Construction:	A DNA sequence encoding the human ENPP7 (NP_848638.2) (Met 1-Ser 439) was fused with a C-terminal polyhistidine tag. Predicted N terminal: Ala 22
Species:	Human
Expression Host:	HEK293 Cells
Accession:	Q6UWV6
Molecular Weight:	49 kDa (predicted); 55-60 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 95 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:
A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Ectonucleotide pyrophosphatase / phosphodiesterase family member 7, also known as Alkaline sphingomyelin phosphodiesterase, Intestinal alkaline sphingomyelinase, Alk-Smase, ENPP7 and NPP-7, is a single-pass type I membrane protein which belongs to the nucleotide pyrophosphatase / phosphodiesterase family. ENPP7 / NPP-7 is expressed in the intestines and human bile. ENPP7 / NPP-7 is localized at the surface of the microvillar membrane in small intestine enterocytes, as well as in endosome-like structures and in Golgi complex. The main

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function of ENPP7 / NPP-7 is to convert the dietary sphingomyelin into ceramide, the sphingolipid messengers via hydrolyzation. ENPP7 / NPP-7 is also reported to exert a phospholipase C activity toward palmitoyl lyso-phosphocholine. The activity of this enzyme is inhibited in a dose dependent manner by ATP, imidazole, orthovanadate and zinc ion. Further, It has been shown in studies that decreased levels of ENPP7 / NPP-7 may be associated with human colon cancer.

Reference

- Wu J. et al., 2005, Biochem. J. 386:153-60.
- Wu J. et al., 2004, Carcinogenesis 25:1327-33.
- Duan R.-D. et al., 2003, J. Lipid Res. 44:1241-50.
- Duan R.-D. et al., 2003, J. Biol. Chem. 278:38528-36.

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